The crucial role of the 'Mittelstand' in the economy of postwar Germany

by Lothar Komp

According to economic textbooks, the postwar success of the German economy was the result of essentially three factors: the currency reform, the liberalization program of Ludwig Erhard, and the influx of funds from the Marshall Plan.

But none of these reasons is really convincing. The currency reform, which was worked out by the U.S. occupying forces and then enforced in June 1948, had one primary purpose: to cut off the enormous amount of extra liquidity that had been created by Hitler's financing of the war. The currency reform was a necessary corrective measure, but in itself would never have caused an economic upswing. In effect, the immediate consequence of the currency reform was exploding unemployment in late 1948 and 1949.

The step-by-step abandonment of price freezes and similar liberalization measures by Ludwig Erhard were not a driving factor, but only a more or less natural consequence of economic normalization. The first really successful measure of the German government, following the mass unemployment in the winter of 1949-50, was the establishment of a huge job creation program in 1950, focussing on housing construction.

The Marshall Plan and the Garioa funds (Government Aid and Relief in Occupied Areas) allowed crucial imports of food and raw materials for the German people and German industry in 1948 to 1952. But, simultaneously, the Allied forces destroyed or dismantled large parts of the remaining industrial capacities in Germany as part of the so-called "démontage" policy. Until the end of 1949, more than 300 industrial plants were dismantled in the Western occupied areas, representing something between 4% and 7% of industrial capacities. In the Eastern zone, the Soviets dismantled more than 50% of the remaining capital goods. The Marshall Plan funds were much lower than this form of industrial destruction. Furthermore, Germany was not the primary recipient of Marshall Plan aid, as shown by the following figures of U.S. Marshall Plan aid through the end of 1952 (millions of dollars):

Great Britain	$3,165.8
France	2,806.3
Benelux countries	1,532.8
Italy	1,515.0
Western Germany	$1,412.8
Austria	711.8
Greece	693.9
Denmark	275.9
Sweden	107.1

Much more important than the original Marshall Plan funds, was the continous reinvestment of these funds up to the present day into the German industrial sector, and in particular into the modernization of small and medium-sized companies. Here we come closer to the secrets of the German postwar "economic miracle."

The Marshall Plan funds were essentially credits to the German private sector, in order to buy certain U.S. goods. The credits had to be paid back, not in U.S. currency, but in deutschemarks. In November 1948, the Kreditanstalt für Wiederaufbau (KfW), the Bank for Reconstruction, was founded in Frankfurt. It was established in order to receive the repayments of these Marshall Plan credits and then to reinvest this money into certain industrial sectors, in the form of medium-term and long-term credits. For almost the past 50 years, the KfW has been a crucial state-run instrument for dirigistic economic activities. Today, the KfW gives new credits of about DM 40 billion (about $26.3 billion) per year to German companies.

In addition, German Finance Minister Fritz Schaeffer, in the early 1950s, created a taxation system that was designed to promote investments by small and medium-sized companies, in particular promoting their export-oriented efforts.

Thus, the German postwar economic success was not a consequence of the mentioned textbook measures. Instead, the most decisive factors were purely subjective ones: the skill and the creative potential of the German workforce, and the mobilization of this potential by certain dirigist policies. As I shall illustrate, the mobilization of such potential requires the establishment of what is called in German, the *Mittelstand*—the small and medium-sized firms.

The situation today

In general, economic sectors are dominated by big companies, when the following conditions apply:

- They require very large investments into plant and

A demonstration in Mainz by the Civil Rights Movement Solidarity, April 1996. The banner reads: "Production, Not Speculation." The mobilization of Germany's tremendous industrial potential requires an understanding of what really made possible the postwar economic "miracle."

equipment, such as basic industries;

- They produce bulk goods, such as steel, chemical goods, or automobiles;
- They require extensive infrastructure networks, such as railways or telecommunications;
- There is a need for risk sharing, such as the banking and insurance sectors.

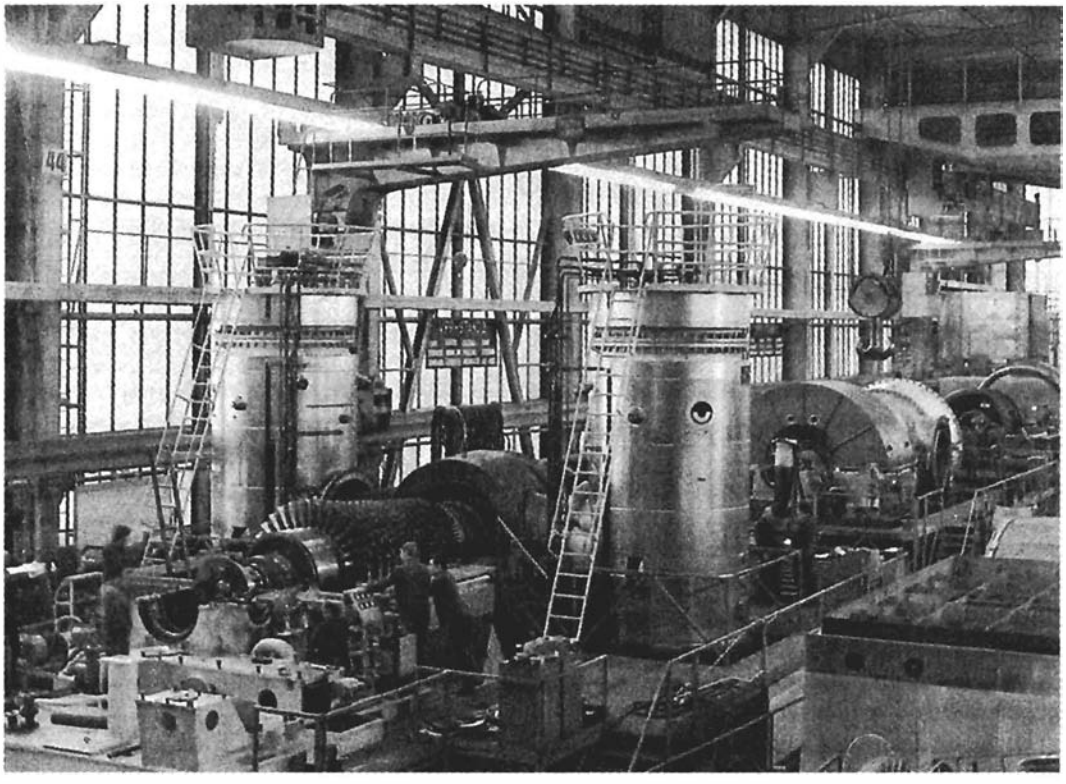
But only 1% of the 2 million German companies have more than 500 employees. Even more revealing, concerning the orientation of the German economy toward medium-sized companies, is the fact that 60% of all jobs are with companies of fewer than 500 employees. About 70% of all taxes in the private sector are paid by small and medium-sized companies. In the particular case of taxes on profit, by far the biggest part of company taxes, 41%, is contributed by small companies, 32% by medium-sized companies, and only 27% by big companies.

The question is, why do we have so many small and medium-sized companies? What is their particular advantage or role? The answer to this question is given by looking at the crucial characteristics of *Mittelstand* companies. These are:

- The company has essentially a one-man leadership, where the manager is the owner of all the capital stock, without dependence on shareholders outside of his family.
- As a consequence, not short-term profit, but the long-term survival and well-being of the company, determines operations.
- The fate of the company and the fate of the owner's family are one and the same. The success of the company depends upon the successful work of not only the owner's present family, but also some generations in the past and in the future. In the case of failure, in most cases, the entire property of his family is lost.
- The *Mittelstand* owner knows every aspect of his company in detail and has a personal relationship to most of his employees.
- The difference between the manager of a big enterprise and the owner of a *Mittelstand* company is sometimes described as the difference between a member of a military general staff, on the one hand, and the leader of a military unit on the other. Only the *Mittelstand* is capable of performing flanking maneuvers. If the manager of a big company fails, he gets fired in the ordinary sense, whereas the *Mittelstand* owner gets "fired" in a more literal sense.
- In spite of its long-term orientation, the *Mittelstand* company is much more flexible in responding to new economic challenges and in adjusting and modernizing its production processes, both in terms of workforce and of equipment.

For this reason, *Mittelstand* companies have a much higher share of skilled employees than bigger conglomerates. Without this flexibility of the *Mittelstand,* the highly specialized market basket of consumer goods and capital goods that is essential for a highly developed industrial society, could not be produced.

- Therefore, the *Mittelstand,* in particular in the machine-tool sector, acts as a transmission belt, translating new scientific principles into the production process.



Turbine production at Kraft Werke Union. Industrial giants like KWU rely on the smaller companies of the Mittelstand *to produce vital components.*

Education

A key factor for the productivity of the German economy is the education and skill of its workforce. Since the education reforms in the 1970s—when the educational concept of Wilhelm von Humboldt was abandoned, which had focussed on overall character-building instead of modern "learn what you need" methods—some obvious defects have developed in the German educational system. This is illustrated, for example, by the wave of anti-technology and irrational tendencies, spreading in Germany since the mid-1970s. Other Western countries have had similar experiences.

However, in respect to the apprentice system, the radical reform plans of the 1970s were successfully blocked by industry. Today, the German apprentice system, the so-called dual system of simultanenous theoretical education and practical training, is still the best in the world, even if the number of new apprentices has been decreasing in recent years.

Out of the 1.85 million training positions in Germany, 85% were offered by small and medium-sized companies. In the productive sectors, this share is even higher: 90%. Most of the skilled workforce of big companies was first trained in *Mittelstand* firms. Here, the apprentice becomes acquainted with the entire production process in his company, even management operations. Because *Mittelstand* firms are much more dependent on the high qualification of their employees, they invest a lot of effort into training of apprentices, and also in the continuous further education of all their employees. To state it again, this crucial job for the German economy is being done almost entirely by *Mittelstand* companies.

Show cases: automobile and machine production

Figure 1 shows the distribution of jobs, relative to company size. As an example of a sector that is dominated by a small number of big companies, we can take automobile production. In the cases of aerospace or shipbuilding, we would get similar results.

In the mid-1980s, there were only 11 different automobile producers in Germany. They employed 400,000 people and achieved a turnover of DM 75 billion ($49.3 billion) per year.

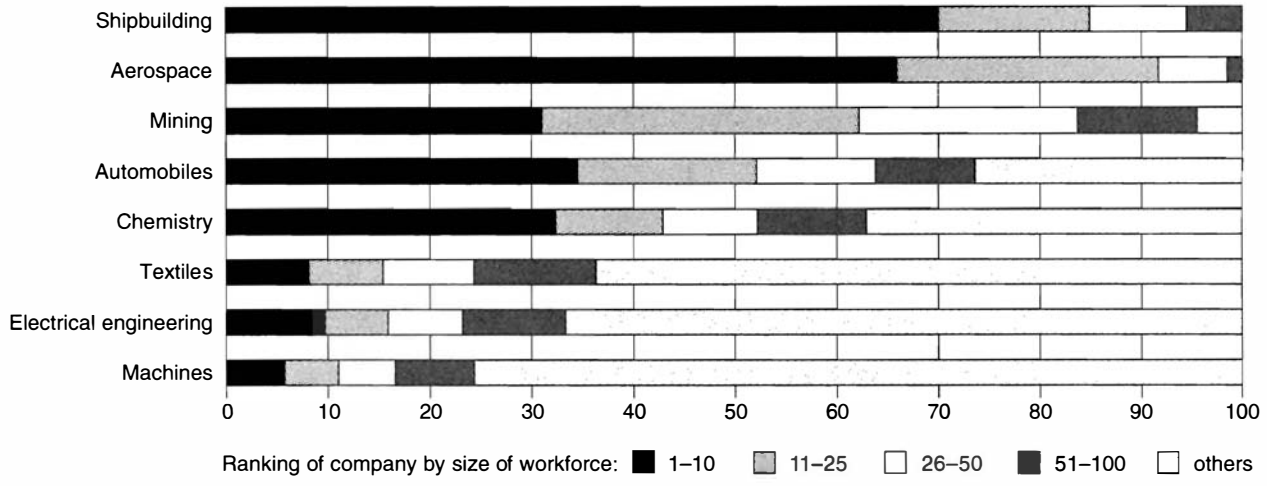
But almost none of the automobile spare parts are produced by these big companies. These come from a large number of highly specialized *Mittelstand* suppliers.

More than 50% of all the components of cars are produced by these small and medium-sized suppliers. Automobile suppliers and automobile service companies employ a total of 800,000 people. Here we have 3,000 spare parts and components producers, 800 trading houses for these products, 35,000 automobile repair firms, 5,000 car trading firms, and 24,000 gas stations. The automobile suppliers alone contribute about 500,000 jobs.

Daimler-Benz alone cooperates with about 28,000 small and medium-sized suppliers and service companies. Obviously, the productivity, high quality, and flexibility of these companies decides, whether a big automobile producer is successful or not.

Unlike automobile production, the machine-building sector is almost completely dominated by *Mittelstand* companies. The "top ten" western German machine producers share

FIGURE 1
Share of top companies in employment of sector, West Germany, 1990
(percent)



As the chart shows, the shipbuilding industry, for example, is dominated by the largest firms (70% of total employment in the sector), whereas in machine-building, 75% of employment comes from the smaller firms.

Sources: Federal Statistical Office, *EIR*.

less than 6% of the overall employment in machine production. Yet these 6,000 companies, employing 1 million people, in many areas dominate the world market (see **Table 1**). About 30% of internationally traded machine tools are produced by German companies, most of them having between 200 and 500 employees.

Hidden champions

There is a certain group of German *Mittelstand* companies that needs closer attention, because it is in some respects the heart of the German economy. Last year, there appeared a study by Hermann Simon, identifying 500 so-called "hidden champions." These are all *Mittelstand* firms; most of them not well known, even to the German public. However, they all are leaders of the world market in their special production areas. It is estimated that these 500 "hidden champions" are only the tip of the iceberg of such companies in the German *Mittelstand.*

The typical "hidden champion" has 700 employees, an annual turnover of DM 200 million, and exports more than 50% of its production. Another 20% of such production is of spare parts for the export products of other German companies. So, taking this into account, the export share is 70%.

Some other interesting characteristics of the "hidden champions" are that, in general, they are by far not the cheapest producers in the world. Instead, they dominate world production due the quality and reliability of their products. Contrary to other parts of the German private sector, the "hidden champions" are not "outsourcing" their jobs to countries where cheap labor prevails. They are internationally successful by paying wages to their German employees that are well above prevailing German standards.

TABLE 1
World market share of German machinery, 1982

Drier facilities, surface coating and processing	48%
Steel mill and foundry equipment	47%
Woodworking machinery	39%
Printing presses and equipment	39%
Paper finishing and processing machinery	38%
Machines for the rubber and plastics industry	36%
Food processing and packaging machinery and equipment	34%
Gearboxes	34%
Building materials fabrication equipment	34%
Precision tools	34%
Mining equipment	32%
Machine tools	31%
Textile machinery	30%
Roller bearings	28%
Conveyor and materials handling technology	21%
Paper production machines	20%

More than three-quarters of the "hidden champions" are owned by one person and his family. The median age of the owner is 67 years, an age at which many board members of big industries or banks, such as Hilmar Kopper of Deutsche Bank, have long ago finished their careers. About 40% of

TABLE 2

'Hidden champions' of German industry

(world market share is given in percentages, where available)

a) Machine production sector

Automatik App-Maschinenbau—underwater pelletizing equipment, 70%
Baader—fish-processing machines, 90%
Barmag—machines for synthetic fiber production, 3,700 employees
G.W. Barth—coffee- and cacao-roasting machines, 70%
Brueckner—biaxial foil-stretching machines, 280 employees
Claas—reaper machines
Deutz Motor Industriemotoren—air-cooled diesel engines, 80%
Duerr—varnishing plants, 3,000 employees, 20%
Ex-Cell-O—specialized milling and grinding machines for shaping parts, 1,300 employees, 70%
Grenzebach—cutting, storing, and transporting equipment for plate glass production, 450 employees, 50%
Hauni—cigarette production, 90%, and complete tobacco-processing plants, 100%
Heidelberger Druckmaschinen—offset printing machines
Kaercher—high-pressure cleaning systems, 35%
Karl Mayer—sorting machines
Koenig & Bauer—money-printing machines, 2,000 employees, 90%
Krones—bottle-labelling machines, 7,600 employees, 80%
LOBO Electronic—computer-controlled laser systems
Lurgi—specialty chemical plants
Nietzsch—machines for the ceramics industry, 2,800 employees
Prominent—dosage pumps, 800 employees
Putzmeister—concrete pumps
Rofin-Sinar—industrial lasers, 460 employees, 21%
Schaudt—specialized grinding machines
SEW Eurodrive—transmission engines
SMS Schloemann-Siemag—rolling mills, 2,500 employees, 30%
Stihl—power saws, 30%
Trumpf—cutting machines for sheet metal and industrial lasers
Uhde—specialized chemical plants
Weinig—profile milling machines, 50%
E.C.H. Will—textbook printing equipment, 50%
Wirtgen—asphalt milling machines for road maintenance and asphalt recycling machines
Peter Wolters Werkzeugmaschinen GmbH—machines for precision surface finishing and processing

b) Other sectors

Brita—water filters, 85%
Drägerwerk AG—respiratory equipment, medical and space travel
Gerriets—stage curtains, 100%
Heidenhain—electronic measuring instruments, 40%
Hensoldt & Söhne—binoculars, 1,000 employees, 50%
Matth. Hohner—harmonicas and accordions, 1,000 employees, 85%
Kiekert—automobile locking systems, 2,700 employees
Leybold—vacuum pumps and equipment, 30%
Maerklin—model (toy) trains, 1,700 employees, 55%
Louis Renner—high precision piano mechanisms
Scheuerle—heavy transports above 10,000 tons
Schott—ceramic hot plates (Ceram)
Schwank—gas infra-red radiators, 30%
Steiner Optik—military binoculars, 80%
Suspa—shock absorbers for washing machines, 40%
Webasto—automobile air-conditioning, 50%

the "hidden champion" companies are already more than 50 years, and 25% are more than 100 years old, and therefore have survived many political and economic shocks. In most cases, the owner has a technical or engineering education. Often, he himself, or one of his predecessors, has invented crucial improvements in the company's production process. Often, they invented products that previously did not exist, and for which there was therefore no existing market. In some cases, in particular in the machine production sector, three-quarters of all the products of the company have been in production for less than five years. Unlike the big aerospace or automobile companies, the "hidden champions" have, in most cases, no separate research and development department, but all the inventions of the company are made by one exceptional person.

The 500 identified "hidden champions" alone have an export turnover of DM 50 billion—that is, about 12% of all German exports, and employ 200,000 highly skilled workers. Not surprisingly, the largest group among the "hidden champions" is machine production (see **Table 2**), with a share of 37%, followed by electrical engineering (11.8%), and metal processing (10.1%), then chemistry, printing, food production, and textiles.

All the German economic successes of the postwar period were built upon this structure of *Mittelstand* companies.